WORK-RELATED BURN SURVEILLANCE IN UTAH, 2000

November 30, 2001
Environmental Epidemiology Program
Bureau of Epidemiology
Utah Department of Health

EXECUTIVE SUMMARY

Work-related burns are a leading cause of occupational injury in the United States. Approximately 1.4 million persons in the United States sustain burns each year, of which approximately 54,000-108,000 are hospitalized. Work-related burns account for 20-25% of all serious burns, and approximately 6% of all work-related thermal burns occurred among adolescent workers aged 16-19 years. The data collected in Utah thus far comprise calendar years 1996-2000, however, case data for 1996 is not considered complete as the program first began collecting data in the fall of 1997. Data obtained prior to this time frame on work-related burns in Utah is limited, and the sensitivity of the data is poor. Additionally, three Utah hospitals have not yet reported data for 2000. When received, this data will be included in future annual reports.

This project is funded by a grant from the Centers of Disease Control and Prevention (CDC) and National Institute for Occupational Safety and Health (NIOSH). The Environmental Epidemiology Program, in which the grant is coordinated, continues to maintain the registry of work-related burn cases in Utah, and uses the information from cases to develop and implement intervention activities, help ensure that affected workers are identified and receive the appropriate medical and environmental follow-up, and ensure that appropriate prevention activities are directed toward targeted industries.

Hospital discharge data was received by the Utah Department of Health's, Bureau of Epidemiology under the authority of the Utah Injury Reporting Rule (R386-703). The Injury Reporting Rule requires that injuries be reported by hospitals to the Bureau of Epidemiology. Patient records containing one or more International Codes of Diagnosis, 9th Revision, Clinical Methods, (ICD-9) codes attributed to burns were then evaluated to determine if the burn injury was work-related.

The EEP examined the incidence of hospital admissions attributed to work-related burns that occurred in the state of Utah in 2000. During 2000, hospitals throughout Utah reported 450 hospital admissions that were attributed to burns. Of these reported burn-related injuries, 87 cases were work-related and 363 were non-work-related. The incidence of work-related burns in Utah for 2000 is 8.1 (Male: 12.4; Female 2.9). Incidence rates (crude) were calculated *per 100,000 population* and are based on Utah's 2000 estimated total workforce population.

The incidence for work-related burns is significantly higher among males than females, and relative to age groups, persons 15 - 19 years of age demonstrated the highest incidence of work-related burn injuries. Salt Lake County accounted for 44 percent of the total workforce

population and was the largest contributor to work-related burn injuries accounting for just over 23% of the burns. Wednesday is the day of the week most likely for a work-related injury to occur, and January is the most likely month for an injury. Eating places accounted for most of the work-related burns, and college graduates were less likely to be burned on the job than non-college graduates.

In Utah, 1,479 burns (thermal, chemical and electrical) have been reported to the Utah Department of Health Work-Related Burn Injury Program comprising calendar years 1997 through 2000. The program began collecting data in the fall of 1997. Approximately 23% of all burn cases reported from hospital discharge data for calendar years 1997 through 2000 were work-related. Of the total 340work-related burn cases reported in Utah for 1997-2000, 25.3% occurred among workers aged 16-24 years old, and 74.7% occurred among workers 25 years and older. As a note, the results of this study do not include data from outpatient health clinics and doctors offices, as these health care facilities are not required to report to the Utah Department of Health.

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INTRODUCTION

Work-related burns are the leading cause of injury in the United States (CDC, 1993). Approximately 1.4 million persons in the United States sustain burns each year, of which approximately 54,000 to 84,000 are hospitalized.

In October of 1997, the Environmental Epidemiology Program (EEP) established a registry of work-related burn cases in Utah. This project is funded by a grant from the Centers of Disease Control and Prevention (CDC) and National Institute for Occupational Safety and Health (NIOSH). The EEP maintains the registry of work-related burn cases in Utah, and uses the information from cases to develop and implement intervention activities. Interventions include education and consultation to employers where burn hazards are present, education for cases and workers, broader industry-wide studies, and research.

METHODS

Hospital discharge data was received from hospitals by the Utah Department of Health's, Bureau of Epidemiology under the authority of the Utah Injury Reporting Rule (R386-703). The Injury Reporting Rule requires that injuries be reported by hospitals to the Bureau of Epidemiology. Patient records containing one or more International Codes of Diagnosis, 9th Revision, Clinical Methods, (ICD-9) codes attributed to burns were then evaluated to determine if the burn injury was work- related. Medical records of each work-related case were abstracted to gather risk factor information such as personal identifiers, days hospitalized, employer, insurance, severity, and cause of injury regarding the work-related injury. The work-related burn injury data was then entered into the work-related Burn Injury Registry using EpiInfo 6.0 software.

Extraction of tabular data for all burns by county, age group, and gender was performed using the EpiInfo 6.0 software. All rates presented are crude rates calculated *per 100,000 population* unless otherwise specified and are based on Utah's 2000 estimated workforce population. Analysis of incidence rates was performed using Corel Quattro Pro 8. Workforce population estimates for age groups and gender for 2000 were obtained from the Utah Department of Workforce Services, Division of Workforce Information and Payment Services (UDOWS, 2000).

Surveys were mailed to those cases identified as work-related to obtain more detailed risk factor and demographic information. Surveys were also mailed to employers when permission was granted by the cases. All survey data and data obtained from medical abstractions are entered onto EpiInfo 6.0 software for analysis. A bias in the analysis of data may be present as not all surveys are returned by cases. Additionally, medical records which are extracted do not always contain information for all categories desired.

RESULTS

There were 87 work-related burns reported in Utah during 2000. The incidence rate for work-related burns was significantly higher among males (12.4) than females (2.9). The incidence for both males and females was 8.1 per 100,000 (workforce) population in Utah. Of the 87 work-related burns reported, males accounted for 84 percent of the injuries in contrast to females who accounted for 16 percent of the injuries (Table 1, Appendix).

Relative to age groups, workers who were 25 - 54 years of age accounted for 58 percent of all work-related burns (Table 2). Thirty-seven percent of the work-related burns occurred among workers less than 25 years of age. This indicates a significant change in the less than 25 years of age group from previous years analysis of data.

Relative to counties, 23 percent of all the work-related burns occurred in Salt Lake County. The counties demonstrating the next highest percent occurrence of work-related burns include Duchesne (13.8%), Juab (10.3%), Grand (9.2%), Sanpete (6.9%), and Utah (6.9%) (Table 3). Salt Lake County accounted for 44 percent of Utah's workforce population, while 18% of the workforce population was accounted for in Utah (15.5.0%), Sanpete (0.8%), Grand (0.5%), Duchesne (0.5%), and Juab (0.3%) counties (Table 4). The remaining counties accounted for 30 percent of the work-related burn injuries and 38 percent of the workforce population, respectively.

Data from the 2000 case questionnaires and medical abstracts completed indicate a wide variety of industries in which work-related burns occur. As noted from 2000 abstraction records and returned surveys, 24.1% of work-related burns occurred in Eating Places (SIC code 5812) as compared to 29.6% in 1999. The majority of cases were related to contact with hot food, grease, or beverage, or contact with the equipment used to heat food and/or beverages. The second highest percent of work-related burns (7.2%) during 2000 occurred in the Water, Sewer, Pipeline, and Communications and Power Line Construction Industry (SIC 1623). Additional industries noting work-related burns occurrence at 4.8% each, also compiled from questionnaires and abstraction records include: Farming (SIC 0191), Underground Coal Mining (SIC 1222), Electrical Work (SIC 1731), and Hotels and Motels (SIC 7011). The balance of the work-related burns occurred in 32 various industries at 1-3 occurrence each. A more detailed account is tabulated in Appendix B from the questionnaires returned and abstraction of medical records for work-related burn injuries surveyed for 2000.

In 1999, 79% of those surveyed indicated that they were employed full-time when burned. Twenty-one percent were part-time employees. Six percent reported that they periodically perform the task associated with the injury, while 46% reported that they performed the task associated with the injury on a daily basis. January was the month most likely for a work-related burn to occur (17%), and Wednesday was the most likely day (22%). Fifty-five percent of the reported work-related burns occurred between the hours of 7:00 a.m. and 3:00 p.m., the traditional day shift. Ninety percent of the work-related burn cases occurred to those who had some high school or had completed high school only, as compared to 5% who had completed high school and went on to complete two years of college. Five percent of the burn cases were reported to be college graduates. Seventy-three percent of the work-related burns were from a thermal source, 14% were from an electrical source, and 13% were from a chemical source. Work-related burn accidents involving only one person were reported 89% of the time, and 72% occurred inside a building. Ninety-three percent of the cases reported that in their opinion, the burn accident could have been prevented, and 86% stated that they were aware of a written set of safety rules provided by the employer (See Case Questionnaire Summary Report in Appendix).

DISCUSSION

Surveillance of work-related injuries involves the enumeration, description and determinants of injuries in workplace populations. Surveillance is the scientific basis for prevention. Successful surveillance strategies depend on consistent case definitions and ascertainment strategies as well as standardized and comprehensive reporting mechanisms (Peek-Asa, Schaffer, et al, 1998). Without accurate and comprehensive case ascertainment, surveillance will underestimate the true number of events, which may lead to misidentification of high risk areas and activities associated with work-related burns.

Burn injuries represent a major complaint for patients presenting to emergency rooms in the US, with over a million visits annually. While the majority of burn injuries are not life-threatening, major burns have a significant risk of mortality and morbidity. Less significant burns still carry a real risk of scar formation and compromise of function. Appropriate intervention activities to reduce the number of work-related burns can reduce untold mental and physical trauma to Utah workers by reducing the number of work-related burn injuries.

Work-related burns can be divided into three causal categories: thermal, chemical, and electrical. Thermal burns are caused by contact with hot objects, flames, or steam. Chemical burns are caused by contact with acids or bases. Electrical burns are infrequent, but can cause major damage. Electrons flowing abnormally through the body of a person produce injury and/or death by depolarizing muscles and nerves, by initiating abnormal electrical rhythms in the heart and brain, and by producing electrical burns by heating and by poration of the cellular membranes. The skin is the largest organ of the body and serves multiple functions essential to

the survival of the individual. It plays a major role in thermal regulation and prevents fluid loss from evaporation. It is a barrier against infection and contains many of the sensory receptors that provide the nervous system with information about the environment. In case of a major burn, these functions are compromised. In Utah in 2000, 73% of the burns reported to the work-related burn surveillance program were thermally caused, 14% were caused by contact with a chemical, and 13% were caused by contact with an electrical source.

This statewide surveillance project is the only system in Utah dedicated to collecting data and tracking injuries associated with work-related burns. The current focus of this project is to maintain the registry of work-related burn cases in Utah and to use the information from cases to develop and implement intervention activities. These activities include education and consultation with employers where burn hazards are present, education for work-related cases and workers in general, and broader industry-wide studies and research. During calendar year 2000, the Work-Related Burn Project solicited the assistance of local health departments to discuss work-related burns and distribute educational materials during food handler permit classes and/or food establishment permit renewals. Survey results returned to the Utah Department of Health from work-related burn cases indicate that 93% of the accidents were preventable in the opinion of the injured person, and 46% of those burned performed the task related to the burn on a daily basis. These statistics indicate that there is a need for continuing a focused work-related burn intervention strategy in the state.

Work-related burns are a leading cause of occupational injury in the United States. A substantial proportion of these burns occur among restaurant workers. Results of data collected by the Utah work-related burn surveillance project in 2000 and previous years, indicate that the highest percent of work-related burns in Utah occurred in Eating Places (SIC code 5812). The majority of cases were related to contact with hot food or beverage, or contact with the equipment/materials (grease) used to cook food and/or beverages. The Utah Work-Related Burn Surveillance Program found that in calendar year 2000, 35 % of those burned while employed in Eating Places (SIC code 5812) were 20 years of age or younger, and 55% were age 25 and younger.

This evaluation observed that the sex-specific incidence rate for males was over four times the rate of females (Table 1) although U.S. Bureau of Labor statistics indicate that women account for only 45% of the Utah workforce population. Salt Lake County accounted for nearly one-fourth (23%) of all the work-related burn injuries (Table 3). This is primarily attributed to the fact that in 2000, Salt Lake County accounted for 44 percent of the workforce population in Utah (Table 4) (UDOWS, 1998).

CONCLUSION

During 2000, the Work-Related Burn Surveillance Project collected information on 87 work related burn injuries out of a total of 450 burns reported through hospital discharge reports.

Analysis of the burn data suggests that there is a need for a focused work-related burn prevention program as 93% of those injured suggest that the burn accident could have been prevented, and 46% indicate that they were injured performing a task on which they work daily.

One of the goals of the Work-Related Burn Surveillance Program is to identify high risk populations in the State of Utah, and to develop intervention strategies to reduce the number and frequency of work-related burns. From the data collected in calendar years 1997 through 2000, certain high risk industries have emerged as prime candidates for targeted intervention activities. A significant portion of the reported work-related burns continue to come from all types of eating establishments as indicated by surveillance data. As previously noted, local health departments during food handler permit training and/or food establishment permit renewal, have begun to discuss work-related burn prevention and distribute educational materials to workers entering this industry. More intervention approaches need to be developed in the future to reduce the number of work-related burns occurring in this industry. Obtaining the assistance of local health departments in this goal has been the first step of coordinating both government and private industry to jointly work towards reducing the number of workers burned in the state of Utah.

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APPENDIX A
Summary of 1998, 1999, and 2000 Burn Injury Data

Table1. Crude incidence rates of work-related burn cases, total number of work-related burns, total number of burns, and percent of total number of work-related burns in Utah by sex reported for 1998, 1999 and calendar year 2000.

BURN INJURIES IN UTAH BY SEX, 1998 -2000

SEX	TOTAL NUMBER OF BURNS			TOTAL NUMBER OF WORK-RELATED BURNS			% OF BURNS THAT ARE WORK-RELATED			INCIDENCE OF WORK-RELATED BURNS		
	98	99	00	98	99	00	98	99	00	98	99	00
FEMALE	107	136	159	10	13	14	18	20.6	16	1.8	2.2	2.9
MALE	163	187	291	47	50	73	82	79.4	84	9.1	9.2	12.4
BOTH SEXES	270	323	450	57	63	87	100	100	100	5.4	5.8	8.1

Crude incidence rates are calculated per 100,000 population based on Utah's 1998, 1999 and 2000 *total workforce* population.

Data Source: Burn injury data was obtained from the Utah Department of Health's, Bureau of Epidemiology from Databases of Hospital Admissions and Discharge Data under the authority of the Utah Injury Reporting Rule (R386-703)

Table 2. Crude incidence rates of work-related burn cases, total number of work-related burns,

total number of burns, and percent of total number of burns in Utah by age-specific groups during 1998, 1999 and 2000.

BURN INJURIES IN UTAH BY AGE GROUPS, 1998-2000

AGE GROUP	TOTAL NUMBER OF BURNS			TOTAL NUMBER OF WORK-RELATED BURNS			PERCENT OF BURNS THAT WERE WORK-RELATED			INCIDENCE OF WORK-RELATED BURNS		
	1998	1999	2000	1998	1999	2000	1998	1999	2000	1998	1999	2000
0 - 14	60	72	122	0	0	0	0	0	0	0	0	0.0
15 - 19	16	28	58	3	8	17	5	13	20	2.6	6.5	14.5
20 - 24	24	26	42	11	7	15	19	11	17	8.0	4.8	10.9
25 - 34	44	57	64	14	17	17	25	27	20	6.6	7.6	8.0
35 - 44	40	50	55	15	16	17	26	25	20	6.7	6.8	7.6
45 - 54	29	39	45	12	12	16	21	19	18	7.5	7.1	10.0
55 - 64	15	24	19	1	3	2	2	5	2	1.2	3.3	2.4
65 +	42	27	45	1	0	3	2	0	3	0.8	0	2.4
All Groups	270	323	450	57	63	87	100	100	100	5.4	5.8	8.1

Age-specific crude incidence rates are calculated per 100,000 population based on Utah's age-specific *total workforce* population for 1998, 1999 and 2000. Data Source: Burn injury data was obtained from the Utah Department of Health's, Bureau of Epidemiology from Databases of Hospital Admissions and Discharge Data under the authority of the Utah Injury Reporting Rule (R386-703).

Table 3. Crude incidence rates of work-related burn injury cases, total number of work-related burns, total number of burns, and percent of total number of burns in Utah by county during 2000.

BURN INJURIES IN UTAH BY COUNTY, 2000									
COUNTY	**Incidence of WRB**	**Number of WRB**	**Total Number of Burns**	**% of Burns That are Work-Related**	**COUNTY**	**Incidence of WRB**	**Number of WRB**	**Total Number of Burns**	**% of Burns That Are Work-Related**
Beaver	128.9	3	12	3.5	Piute	0.0	0	0	0.0
Box Elder	6.1	1	5	1.1	Rich	0.0	0	0	0.0
Cache	2.3	1	5	1.1	Salt Lake	4.1	20	125	23.0
Carbon	46.2	4	8	4.7	San Juan	23.9	1	20	1.1
Daggett	0.0	0	0	0.0	Sanpete	70.9	6	33	6.9
Davis	4.2	5	20	5.7	Sevier	12.6	1	2	1.1
Duchesne	226.2	12	55	13.8	Summit	0.0	0	0	0.0
Emery	27.9	1	2	1.1	Tooele	8.7	1	8	1.1
Garfield	0.0	0	3	0.0	Uintah	9.5	1	9	1.1
Grand	165.7	8	41	9.2	Utah	3.6	6	40	6.9
Iron	13.8	2	4	2.4	Wasatch	0.0	0	0	0.0
Juab	271.4	9	28	10.3	Wash.	5.2	2	12	2.4
Kane	0.0	0	0	0.0	Wayne	0.0	0	0	0.0
Millard	24.1	1	4	1.1	Weber	2.1	2	13	2.4
Morgan	0.0	0	1	0.0	State of Utah	8.1	87	450	100.0

Crude incidence rates are calculated per 100,000 population based on specific county's 2000 *total workforce* population.
Data Source: Burn injury data was obtained from the Utah Department of Health's, Bureau of Epidemiology from Databases of Hospital Admissions and Discharge Data under the authority of the Utah Injury Reporting Rule (R386-703). WRB - Work-Related Burns

Table 4. Incidence of work-related burns, total number of workforce population, and percent of state workforce in Utah by county during 2000.

WORKFORCE IN UTAH BY COUNTY, 2000							
COUNTY	**Incidence of WRB**	**Total Number of Workforce**	**Percent of State Workforce**	**COUNTY**	**Incidence of WRB**	**Total Number of Workforce**	**Percent of State Workforce**
Beaver	128.9	2,327	0.2	Piute	0.0	482	0.05
Box Elder	6.1	16,449	1.5	Rich	0.0	925	0.09
Cache	2.3	42,823	4.0	Salt Lake	4.1	468,130	43.8
Carbon	46.2	8,666	0.8	San Juan	23.9	4,170	0.4
Daggett	0.0	451	0.04	Sanpete	70.9	8,460	0.8
Davis	4.2	119,050	11.1	Sevier	12.6	7,916	0.7
Duchesne	226.2	5,304	0.5	Summit	0.0	13,915	1.3
Emery	27.9	3,573	0.4	Tooele	8.7	11,545	1.1
Garfield	0.0	2,502	0.2	Uintah	9.5	10,505	1.0
Grand	165.7	4,827	0.5	Utah	3.6	165,502	15.5
Iron	13.8	14,450	1.4	Wasatch	0.0	6,082	0.6
Juab	271.4	3,316	0.3	Wash.	5.2	38,062	3.6
Kane	0.0	2,787	0.3	Wayne	0.0	1,481	0.1
Millard	24.1	4,146	0.4	Weber	2.1	97,139	9.0
Morgan	0.0	3,387	0.3	State of Utah	5.8	1,068,371	100.0

Crude incidence rates for counties are calculated per 100,000 population based on Utah's 2000 *total workforce* population.
Data Source: Burn injury data was obtained from the Utah Department of Health's, Bureau of Epidemiology from Databases of Hospital Admissions and Discharge Data under the authority of the Utah Injury Reporting Rule (R386-703).
Data Source: Workforce population was obtained from the Utah Department of Workforce Services, Division of Workforce Information and Payment Services for 2000.
WRB - Work-Related Burns

Appendix B

Summary of 1998, 1999 and 2000 Case Questionnaire Data
List of Utah Hospitals Reporting to Utah Department of Health

CASE QUESTIONNAIRE SUMMARY REPORT

Sample Industries of employment of work-related burn cases (from 1998-2000 abstracts):

Commercial Printing	Chemical Manufacturing	Metals Manuf.	Trucking
Electrical Power	Airplane Manufacturing	Industrial Machinery	Restaurant
Food Processing	Steel Mill	Hospital	Forest Service
Mining	Public Golf Course	Natural Gas Service	Oil Refining
Refining	University	Construction	Welding
Electronics	Waste Disposal	Food Service	Brewery
Airlines	Hotel	Public Schools	Railroad

Employment Status:

1998	Full Time:	93%	Part Time:	7%
1999		82%		18%
2000		79%		21%

Length of Time in Occupation:

1998	Range 10 to 264 months, with a mean of 10.1 years
1999	Range 1 to 360 months, with a mean of 8.2 years
2000	Range 2 to 456 months, with a mean of 9.4 years

Length of Time at Position:

1998	Range 5 to 262 months, with a mean of 5.9 years
1999	Range 4 to 360 months, with a mean of 7.6 years
2000	Range 2 to 192 months, with a mean of 4.7 years

Frequency of Performing Task Associated with Injury:

	1998	1999	2000
Daily for most of the day:	50%	45%	46%
Once weekly:	14%	36%	30%
Periodically:	28%	19%	6%
Rare, or never before:	8%	0%	18%

Demographics of Work-Related Burn Cases:

1998 Age range of 18 to 72 years, with a mean of 36 years
1999 Age range of 17 to 61 years, with a mean of 34 years
2000 Age range of 15 to 80 years, with a mean of 34 years

	1998	1999	2000
Male:	82%	79%	84%
Female:	18%	21%	16%

Education:	1998	1999	2000
Some high school:	7%	20%	27%
High school graduate:	40%	30%	63%
Two years of college:	40%	50%	5%
College graduate:	13%	0%	5%

Language:

1998 All English speaking
1999 73% English speaking
9% Spanish speaking
18% Other languages
2000 90% English speaking
10% Spanish speaking

Hospitalization Time:

1998 Range of zero to 51 days with a mean of 9.9 days
1999 Range of zero to 25 days with a mean of 1.5 days
2000 Range of zero to 41 days with a mean of 3.3 days

Days of Work Missed:
1998 Range of zero to permanently
One fatality, Two cases injured permanently
Average 22.9 days for those hospitalized

1999 Range of zero to 90 days
No fatalities, no permanent injuries
Average 34 days for those hospitalized
2000 Range zero to 140 days

No fatalities, two cases injured permanently

Burn Injury Accident

Burn injury could have been prevented (opinion of victim):

1998	Yes: 83%	No: 17%
1999	87%	13%
2000	93%	7%

Burn injury occurred as the result of inadequate equipment:

1998	Yes: 34%	No: 66%
1999	60%	40%
2000	25%	75%

Employee was aware of written set of safety rules:

1998	Yes: 64%	No: 36%
1999	83%	17%
2000	86%	14%

Employer provides personal safety equipment for employees:

1998	Yes: 86%	No: 14%
1999	80%	20%
2000	77%	23%

Frequency of safety training sessions:	1998	1999	2000
Infrequent or irregular:	36%	33%	0%
Weekly:	14%	0%	29%
Monthly:	14%	33%	43%
Biannually:	14%	0%	14%
None:	22%	33%	14%

Location of burn injury event:	1998	1999	2000
Outside of enclosure:	25%	11%	28%

Inside of enclosure:	75%	89%	72%

Day of week of occurrence:

	1998	1999	2000
Sunday:	7%	14%	11%
Monday:	21%	13%	18%
Tuesday:	14%	13%	13%
Wednesday:	7%	13%	22%
Thursday:	16%	22%	14%
Friday:	14%	14%	14%
Saturday:	21%	11%	8%

Time of day of occurrence (Ranging from 1:50 A.M. to 8:30 P.M.)

	1998	1999	2000
Day shift (7-3:00):	60%	69%	55%
Swing Shift (3-11):	33%	13%	35%
Graveyard Shift (11-7):	7%	18%	10%

Month of the Year

	1998	1999	2000		1998	1999	2000
January	11%	10%	17%	July	7%	8%	7%
February	1%	3%	9%	August	7%	8%	9%
March	7%	14%	11%	September	7%	6%	2%
April	13%	3%	6%	October	7%	19%	6%
May	11%	3%	13%	November	1%	13%	8%
June	9%	5%	4%	December	19%	8%	8%

Number of workers injured per incident:

1998	1-85% of time
	More than 1-15% of the time
1999	1-100% of time
2000	1-89% of time
	More than 1- 11% of the time

Source of Burns	1998	1999	2000
Thermal Source	67%	68%	73%
Chemical Source	23%	17%	14%
Electrical Source	10%	15%	13%

Degree of Work-related Burns	1998	1999	2000
1st Degree Burn	9%	21%	20%
2nd Degree Burn	67%	55%	61%
3rd Degree Burn	24%	24%	19%

UTAH HOSPITAL REPORTING NETWORK

Allen Memorial Hospital
Alta View Hospital
American Fork Hospital
Bear River Valley Hospital
Beaver Valley Hospital
Central Valley Medical Center
Ashley Valley Medical Center
Brigham City Community Hospital
Castleview Hospital
Lakeview Hospital
Mountain View Hospital
Ogden Regional Hospital
St. Marks Hospital
Cottonwood Hospital
Davis Hospital
Delta Community Hospital
Dixie Regional Medical Center
Fillmore Community Hospital
Garfield Memorial Hospital
Gunnison Valley Hospital
University of Utah Intermountain Burn Center
Kane County Hospital
LDS Hospital
Logan Regional Hospital
McKay-Dee Hospital
Milford Valley Memorial Hospital
Monument Valley Hospital
Orem Community Hospital
Pioneer Valley Hospital
Jordan Valley Hospital
Primary Childrens Medical Center
Salt Lake Regional Hospital
San Juan Hospital
Sanpete Valley Hospital
Sevier Valley Hospital
Tooele Valley Regional Hospital
Uinta Basin Hospital
Utah Valley Regional Medical Center